

Ship ASAP - Door only for Carrie@ DHS 11-03-09

# Work Order ID 67137

Wednesday, March 09, 2011 10:46:27 AM

Page 1

Item ID: D3186-4

Accept

Setup Start

Revision ID:

Stop

Item Name: Spacepod Door, RH

Start Date: 3/9/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 3/10/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool # Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3186

Rev E

100

0.00



Small Fab

Small Fab

Memo

N/A cust. wants door only

Small Fab

1-Trim door to fit spacepod before drill holes and cut out slots for latch as per  
dwg D3186 (D3186-4 detail).

11-03-09  
per 2/13/10  
amir



110

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

8/10/09

(no holes, slots)



120

0.00



Identify as per dwg & Stock Location:

Packaging

Memo

0.00

Packaging

4/3/9

Dart Aerospace Ltd

| W/O: 67137 |      | WORK ORDER CHANGES  |    |          |     |                                     |                          |
|------------|------|---|----|----------|-----|-------------------------------------|--------------------------|
| DATE       | STEP | PROCEDURE CHANGE  | By | Date     | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
| 11-03-09   | 100  | do not drill any holes <del>for changes</del> <u>or</u> cut out <del>holes</del> slots as per attached email, customer will do so as per their Spacepod | ES | 11-03-09 | 1   |                                     |                          |
|            |      |   |    |          |     |                                     |                          |

Part No: D3186-4 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

**Work Order ID 67137**

Wednesday, March 09, 2011 10:46:27 AM

Page 2

Item ID: D3186-4

Accept

Setup Start

Revision ID:

Stop

Item Name: Spacepod Door, RH

Start Date: 3/9/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 3/10/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

C2 11/03/09

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, March 09, 2011 10:46:24 AM

Page 1

Work Order ID: 67137

Parent Item: D3186-4

Parent Item Name: Spacepod Door, RH



Start Date: 3/9/2011

Required Date: 3/10/2011

Start Qty: 1.00

Required Qty: 1.00


**Comments:**

IPP Rev:A New Issue 07-01-11 EC

IPP rev.B revD 07.03.07 ec

10-08-11 added trim door before drilling DD verf:EC

IPP Rev:C

| Component Item ID/<br>Item Name   | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D3186-2M<br><br>SPACEPOD DOOR RH |                        | Manufactured  | No          |                     |                  | 100             | Each               | 1.0000         | 1           | 1            |               |                |        |

ET 11-03-09

Location

Loc Qty

Loc Code

CA

1

45693A

1

X1

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

D

C

B

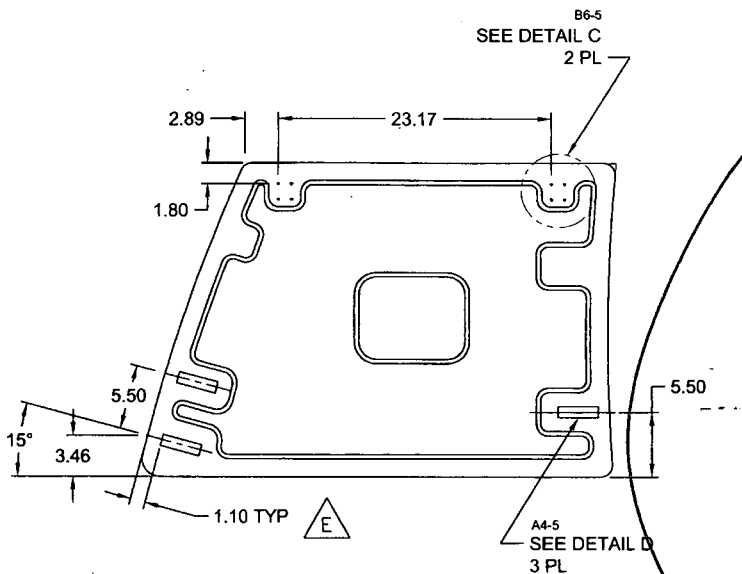
A

D

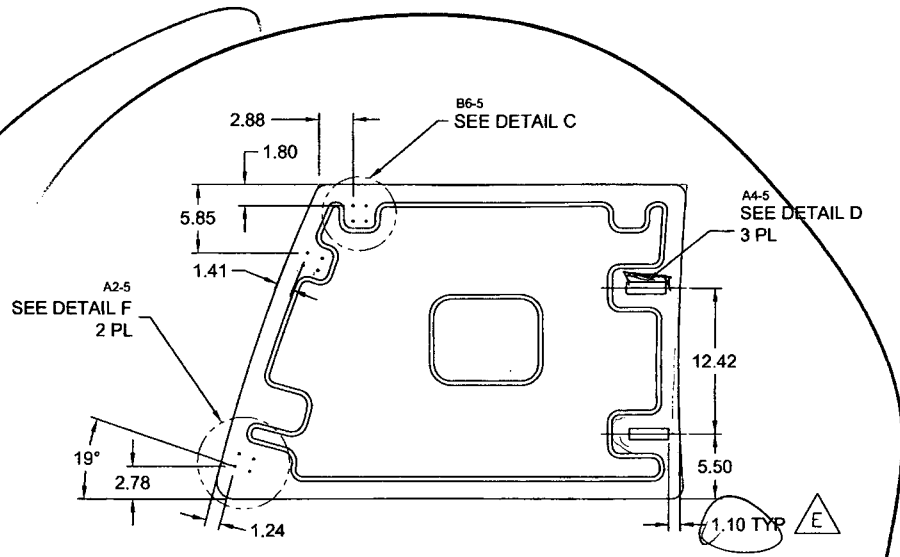
C

B

A



**D3186-2 SPACEPOD DOOR, RH**  
MAKE FROM D3186-2M



**D3186-4 SPACEPOD DOOR, RH**  
MAKE FROM D3186-2M

*mo 6737*

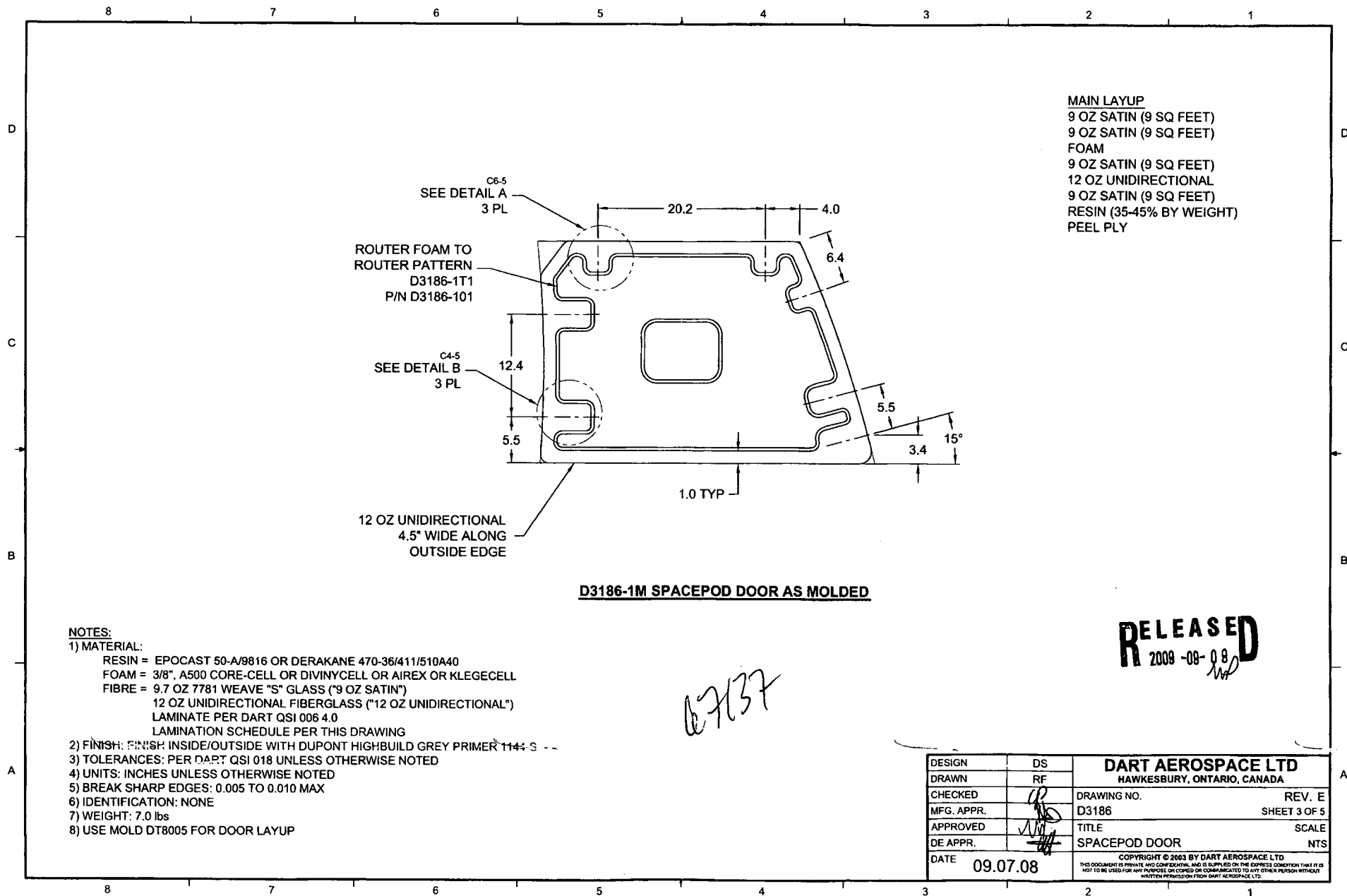
**RELEASED**  
2009-09-09

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A

|            |                    |   |              |
|------------|--------------------|---|--------------|
| DESIGN     | DS                 | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      | RF                 | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    | <i>[Signature]</i> | DRAWING NO.   | REV. E       |
| MFG. APPR. | <i>[Signature]</i> | D3186   | SHEET 2 OF 5 |
| APPROVED   | <i>[Signature]</i> | TITLE   | SCALE        |
| DE APPR.   | <i>[Signature]</i> | SPACEPOD DOOR   | NTS          |
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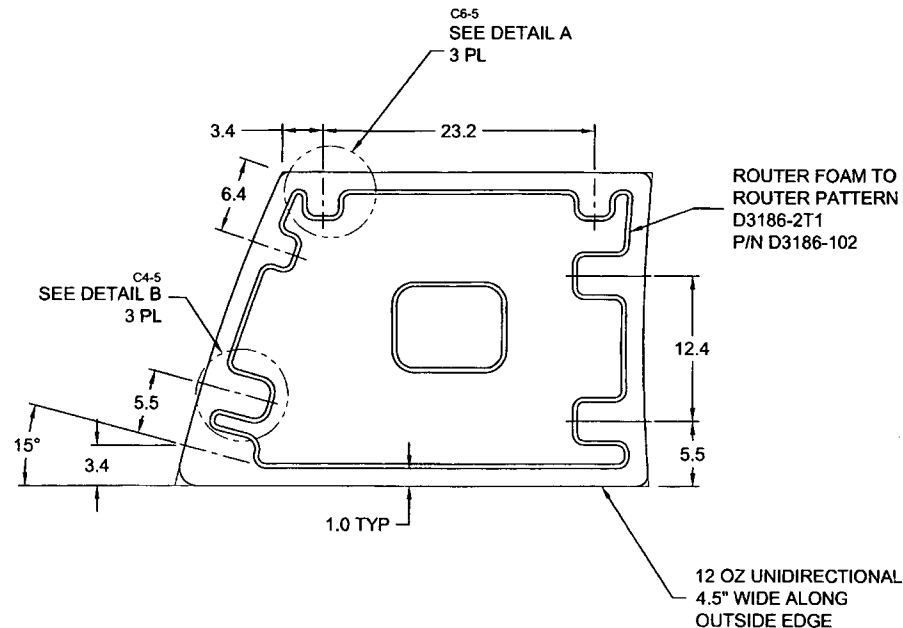
8 7 6 5 4 3 2 1





# **MAIN LAYUP**

9 OZ SATIN (9 SQ FEET)  
9 OZ SATIN (9 SQ FEET)  
FOAM  
9 OZ SATIN (9 SQ FEET)  
12 OZ UNIDIRECTIONAL  
9 OZ SATIN (9 SQ FEET)  
RESIN (35-45% BY WEIGHT)  
PEEL PLY



## **NOTES:**

### **1) MATERIAL:**

RESIN = EPOCAST 50-A/9816 OR DERAKANE 470-36/411/510A40  
FOAM = 3/8" A500 CORE-CELL OR DIVINYCELL OR AIREX OR KLEGECELL  
FIBRE = 9.7 OZ 7781 WEAVE "S" GLASS ("9 OZ SATIN")  
12 OZ UNIDIRECTIONAL FIBERGLASS ("12 OZ UNIDIRECTIONAL")  
LAMINATE PER DART QSI 006 4.0  
LAMINATION SCHEDULE PER THIS DRAWING

2) FINISH: FINISH INSIDE/OUTSIDE WITH DUPONT HIGHBUILD GREY PRIMER 1144-S

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX




6) IDENTIFICATION: NONE

7) WEIGHT: 7.0 lbs

8) USE MOLD DT8006 FOR DOOR LAYUP

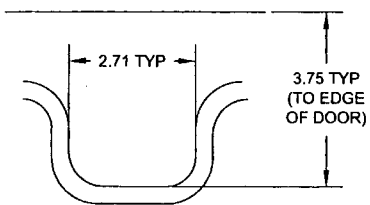
## **D3186-2M SPACEPOD DOOR AS MOLDED**

**RELEASED**  
2009-09-09

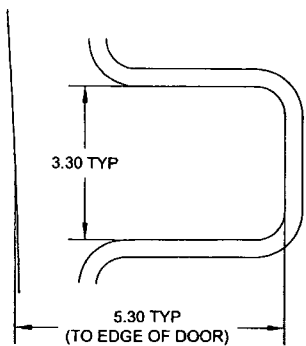
|  |   |  |              |
|--|---|--|--------------|
| DESIGN   | DS  | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN  | RF  | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED  | RF  | DRAWING NO.                            | REV. E       |
| MFG. APPR.   |  | D3186                                  | SHEET 4 OF 5 |
| APPROVED   |  | TITLE                                  | SCALE        |
| DE APPR.   |  | SPACEPOD DOOR                          | NTS          |
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8 7 6 5 4 3 2 1

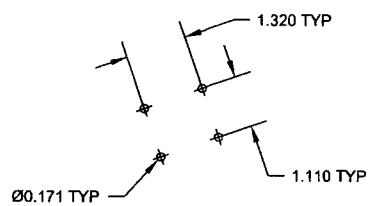
D  
C  
B  
A



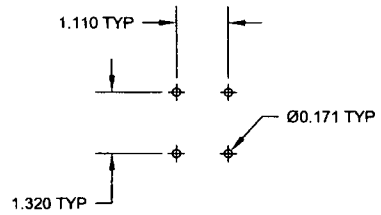
**DETAIL A** D6-3  
SCALE 4X D4-4



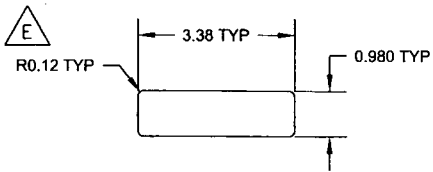
**DETAIL B** C6-3  
SCALE 4X C6-4



**DETAIL E** C1-1  
SCALE 4X

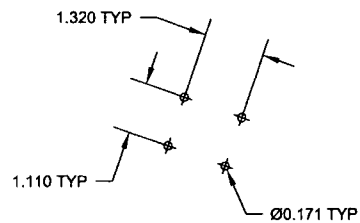


**DETAIL C** D7-1  
SCALE 4X D3-1  
D6-2  
D3-2



NOTE: ENSURE THAT CUTOUT IS PERPENDICULAR TO EDGE OF DOOR





**DETAIL D** C5-1  
SCALE 4X D4-1  
B6-2  
C2-2



**DETAIL F** C4-2  
SCALE 4X

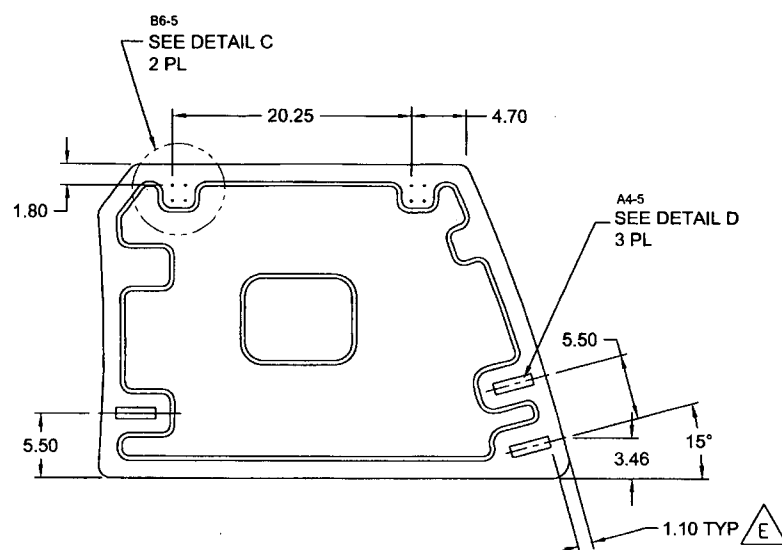
**RELEASED**  
2009-09-09

67137

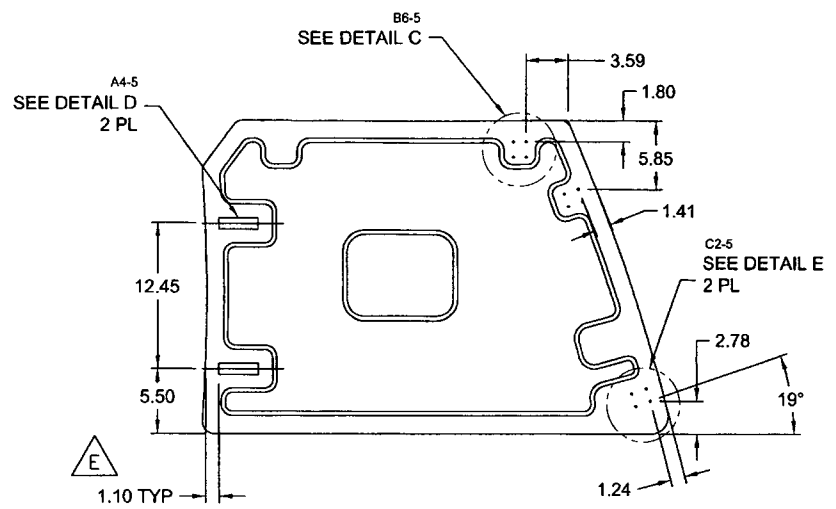
|   |   |  |              |
|---|---|--|--------------|
| DESIGN  | DS  | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN   | RF  | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED   |  | DRAWING NO.                            | REV. E       |
| MFG. APPR.  |  | D3186                                  | SHEET 5 OF 5 |
| APPROVED  |  | TITLE                                  | SCALE        |
| DE APPR.  |  | SPACEPOD DOOR                          | NTS          |
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8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1



**D3186-1 SPACEPOD DOOR, LH**  
MAKE FROM D3186-1M



**D3186-3 SPACEPOD DOOR, LH**  
MAKE FROM D3186-1M

**RELEASED**  
2009-09-09

- NOTES:
- 1) MATERIAL: N/A
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: N/A

07137

| REV.       | DESCRIPTION  | BY  | DATE     |
|------------|--|---|----------|
| E          | DRAWING UPDATED TO CURRENT STANDARDS.<br>1.10 WAS 0.98 (ZN B5-1, B4-1, B7-2, B1-2); R0.12 WAS<br>0.125 (ZN B5-5); REF PAR 09-026 | RF  | 09.07.08 |
| D          | UPDATE DIMENSIONS  | LE  | 07.02.22 |
| C          | REMOVED D0600-XXX LABELS   | LE  | 06.12.13 |
| B          | DIMS UPDATED TO MATCH PRODUCT FOAM PATTERN<br>UPDATED D3186-1M/2M/3/4 ADDED  | LE  | 06.09.25 |
| A          | NEW ISSUE  | CP  | 03.03.27 |
| DESIGN     | DS   | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br><br>DRAWING NO. REV. E<br>D3186 SHEET 1 OF 5<br>TITLE SCALE<br>SPACEPOD DOOR NTS  |          |
| DRAWN      | RF   |   |          |
| CHECKED    | JP   |   |          |
| MFG. APPR. | JP   |   |          |
| APPROVED   | JP   |   |          |
| DE APPR.   | JP   |   |          |
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## Linda Lacelle

---

**From:** Carrie Pearson <carrie@darths.com>  
**Sent:** March 9, 2011 12:09 PM  
**To:** Linda Lacelle  
**Subject:** RE: D3186-4

Yes , that is what we want undrilled

---

**From:** Linda Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** March 9, 2011 11:42 AM  
**To:** Carrie Pearson  
**Subject:** D3186-4  
**Importance:** High

Hi Carrie,

Could you find out if the customer will take the door without the holes for the hinges and latch? Since we cannot fit it to the customers spacepod body, the door cannot be trimmed, and we are unsure if the holes will line up properly to his spacepod body.

Thank You,  
Linda Lacelle  
Production Manager  
Dart Aerospace Ltd  
Hawkesbury, ON  
Phone: 613 632 9577  
Fax: 613 632 1053  
Cell: 613 676 1655

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PLEASE NOTE OUR NEW CORPORATE OFFICE ADDRESS: 4650 North Avenue, Oceanside, California 92056

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| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries